

Before the
Federal Communications Commission
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)

Guidelines for Evaluating the
Environmental Effects of
Radiofrequency Radiation)

ET Docket No. 93-62

DOCKET FILE COPY ORIGINAL

TO: The Commission

**PETITION FOR RECONSIDERATION BY
DEPARTMENT OF DEFENSE**

The Department of Defense (DoD), pursuant to Section 1.429 of the Commission's Rules, 47 C.F.R. § 1.429, hereby submits this petition for reconsideration of the above captioned proceeding, Report and Order FCC 96-326, adopted August 1, 1996 as published in the Federal Register on August 7, 1996. Specifically, DoD seeks opportunity to assess and present comments on Report and Order FCC 96-326 for impacts on the DoD mandate to protect world peace and stability.

INTRODUCTION

On August 12, 1993 the DoD submitted, a response (reference a) generally supporting the Federal Communications Commission (FCC) Notice of Proposed Rulemaking (NPRM) ET Docket No. 93-62. The NPRM proposed to amend the rules and regulations regarding guidelines and methods for evaluating the environmental effects of radiofrequency (RF) radiation from FCC regulated facilities (reference b). The NPRM proposed to use the current standard for RF exposure adopted by the American National Standards Institute (ANSI) in association with the Institute of Electrical and Electronic Engineers, Inc. (IEEE) ANSI/IEEE C95.1-1992 (reference c). The DoD position has not changed.

A petition for reconsideration of the ruling published in the Federal Register on August 7, 1996

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is presented to the Commission under the following circumstances as provided for in 47 CFR Sec. 1.429 chapter I subchapter A part 1 subpart C (b) :

(1) "The facts relied on relate to events which have occurred or circumstances which have changed since the last opportunity to present them to the Commission;"

I. THE PETITIONER HAS NOT HAD OPPORTUNITY TO COMMENT ON THE RULING, WHICH IS SIGNIFICANTLY DIFFERENT AND IS NOT A LOGICAL OUTGROWTH OF THE ORIGINAL NOTICE.

The FCC Report and Order promulgated revised RF exposure limits that differ significantly from those initially considered by the FCC in the NPRM. The adoption of another proposal, without a second NPRM allowing comment, does not appear to conform to Section 553 b. of the Administrative Procedure Act.

The change in the proposed ruling was not made public. While the FCC states that a quick final action was necessary to meet a Congressionally imposed deadline contained in the Telecommunications Act of 1996, there appears to be no valid rationale for the restricted access to the drafting of the final Rulemaking. This observation is especially pertinent since no marketing, competitive advantage, or product development issues were at stake; and industry, the DoD, and other government agencies have historically been involved in leading efforts for ensuring safe RF environments. By all measures, it appears that the FCC decision has taken place in an unnecessarily closed and narrow-focused process. DoD was not made aware of the change until the Tri-Service Electromagnetic Radiation Panel (TERP) obtained, on July 11, 1996, the July 2, 1996 draft Report and Order from the National Telecommunications Information Administration (NTIA) Interdepartment Radiation Advisory Committee (IRAC). This action denied interested parties with safety and health responsibilities, including DoD, opportunity to evaluate the draft and present comments. The TERP is the designated DoD Technical and Policy Advisor for all aspects of Electromagnetic Radiation Safety issues and is

the functional area expert for Health Effects and Protective Measures. The TERP is authorized by Department of Defense Instruction 6055.11 (DoDI 6055.11) (reference i) and qualified to comment on RF Safety and Occupational Health issues.

(2) "The facts relied on were unknown to petitioner until after his last opportunity to present them to the Commission, and he could not through the exercise of ordinary diligence have learned of the facts in question prior to such opportunity;"

II. COORDINATION BY FCC WITH ALL FEDERAL AGENCIES AND DEPARTMENTS WITH HEALTH AND OCCUPATIONAL SAFETY RESPONSIBILITY WAS NOT ADEQUATE. DOD DID EXERCISE DILIGENCE.

The ruling did not receive adequate coordination with all Federal agencies or departments having responsibility for radiofrequency radiation safety and occupational health. The FCC should have coordinated with DoD during the review process.

The DoD agrees with the goal for development of a consistent approach to the treatment of RF environments for both the private sector and the Federal government as stated in the Notice. The final Ruling, however, did not receive appropriate open/public review by many of this country's recognized RF health and safety experts. An open review process by experts, who are publicly identified, is necessary for DoD to consider the Ruling a valid consensus document. Important benefits and strengths accrue to federal agencies adopting consensus standards that carry the broad support of the scientific community.

The DoD demonstrated due diligence. On July 25, 1996, the Assistant Deputy Under Secretary of Defense (Safety and Occupational Health Policy) sent a letter to NTIA identifying DoD concerns (reference e). The TERP filed *ex parte* comments to the Commission on August 1, 1996 (reference f). On August 13, 1996, the TERP briefed the DoD's opposition of the FCC ruling, to the NTIA-IRAC. The IRAC tabled action and suggested a "Petition for

Reconsideration" might be filed by the DoD.

(3) "...consideration of the facts relied on is required in the public interest."

III. FEDERAL COMMUNICATIONS COMMISSION RULING PROCESS JEPORDIZES THE DOD COMPLIANCE WITH THE NATIONAL TECHNOLOGY TRANSFER AND ADVANCEMENT ACT OF 1995.

The process used by the FCC in adopting this ruling hinders the DoD from complying with the National Technology Transfer and Advancement Act of 1995 (P.L.104-113, March 7, 1996), Section 12.(d) (1), which requires that "Federal agencies and departments shall use technical standards that are developed or adopted by voluntary consensus standards bodies,..." (reference g), that was passed in the public's interest. DoD is committed to following this law and will support open, voluntary, non-government consensus based standards, unless data are presented to show cause not to. Standards and regulations such as the FCC ruling 96-326 appear to be "management systems practices" as defined in Sec. 12.(d) (4) of the National Technology Transfer and Advancement Act of 1995. Heads of Federal agencies or departments not complying with The National Technology Transfer and Advancement Act of 1995 are required to transmit to the Office of Management and Budget (OMB) an explanation of the reasons for not using non-governmental voluntary standards unless compliance is inconsistent with applicable law or otherwise impractical (Section 12.(d) (3) EXCEPTION). The ANSI/IEEE C95.1- 1992 Standard is consistent with law and is practical. The use of voluntary standards has been OMB policy since October 1993 (reference d). Public interest will be better served by Federal agency and department use of standards that have received wide and open consensus, such as the ANSI/IEEE C95.1-1992 Standard. The public's interest is not served by a proliferation of conflicting forms of safety guidance. Consistency in standards produces confidence and credibility. The FCC action, which is not supported by a wide consensus, will foster lack of confidence in the voluntary standards setting process and reduce the beneficial impact of the National Technology Transfer and Advancement Act of 1995.

IV. THE FCC'S SCIENTIFIC RATIONALE FOR ABANDONING THE ANSI/IEEE C95.1-1992 STANDARD IS QUESTIONABLE.

The DoD does not find any technical reasons to discontinue observing the recommended limits described in ANSI/IEEE C95.1-1992 or for abandoning DoDI 6055.11 (reference i), which incorporates the recommended exposure limits of ANSI/IEEE C95.1-1992 (reference c). The ANSI/IEEE C95.1-1992 is a scientifically based consensus standard that periodically undergoes review and update. The recent update of this standard initiated the FCC action as described in the NPRM. The ANSI/IEEE C95.1-1992 is, most importantly, an ANSI standard. The FCC's rejection of an ANSI approved standard for a standard that has not undergone ANSI scrutiny is inappropriate. The ANSI process coordinates U.S. voluntary standards, bringing together public and private sectors, and ensures that consensus, due process, and openness are followed. This oversight ensures the integrity of the U.S. voluntary standards system and results in a high level of acceptance and credibility in courts, the international arena, and by the public.

The ANSI/IEEE C95.1-1992 Standard included a number of provisions and changes to address known shortcomings or limitations existing in the previous ANSI C95.1-1982 version. The same shortcomings remain in guidelines contained in the National Council on Radiation Protection and Measurements (NCRP) 86 Report that have been adopted in the FCC ruling.

The ANSI/IEEE C95.1-1992 Standard expanded the lower frequency range to 3 kHz to cover a number of existing RF transmitters, and extended the upper frequency range to 300 GHz to close the gap existing between the ANSI C95.1 RF standard and the ANSI Z 136.1 laser standard. The FCC ruling continues to observe a frequency range of 300 kHz to 100 GHz, and, as noted in paragraph 30 of the Report and Order, the FCC considers this sufficient, since FCC-regulated transmitters of concern do not operate outside this frequency range. However, ANSI/IEEE C95.1-1992, by necessity, will continue to remain the standard of choice for applicable RF

exposure guidelines for other major transmitters operating outside the FCC frequency range, such as the Navy's VLF Submarine Communication Stations (25 kHz), the Coast Guard's OMEGA (10-14 kHz) and LORAN (100 kHz) navigational stations, and the Air Force GWEN sites (150-175 kHz), and to provide personnel protection guidance for engineers developing technologies that employ frequencies above 100 GHz.

The ANSI/IEEE C95.1-1992 Standard differs significantly from the NCRP 86 limits for frequencies above 1.5 GHz. In paragraph 14 of the Report and Order, the FCC states that the overall impact will not be significantly different between ANSI/IEEE C95.1-1992 and NCRP 86 limits, since they are essentially the same for frequencies used by the majority of FCC licensees. The impact may be quite different for operations at the higher microwave frequencies where application of FCC's adopted NCRP limits would mean a one-half and one-tenth reduction, respectively, over the power density levels permitted for controlled and uncontrolled environments given in ANSI/IEEE C95.1-1992. These potential restrictions need to be carefully considered by other federal agencies responsible for operating high-powered radar systems.

The ANSI/IEEE C95.1-1992 Standard imposed more restrictive time-averaging values for exposures occurring at the higher microwave frequencies in order to further limit RF energy deposition in the upper tissue layers of the body. As noted in paragraph 31 of the Report and Order, the FCC "was not aware of any practical situations involving FCC-regulated transmitting facilities where such exposures are likely to occur." It may be that this protective time-averaging provision contained in ANSI/IEEE C95.1-1992 is more applicable to safety evaluations for RF emitters that might be encountered in the close confines experienced in some military settings.

The ANSI/IEEE C95.1-1992 Standard applies new restrictions to limit RF induced and contact currents in the body. This provision was added because dosimetric studies had shown that the

peak SAR criterion of 8 W/kg over any 1 gram of tissue contained in the ANSI C95.1-1982 and NCRP 86 standards, could be exceeded by a considerable margin even under conditions where there was demonstrated compliance with the RF exposure limits in terms of field strength or power density. ANSI/IEEE C95.1-1992 established a more realistic and appropriate peak SAR criteria of 20 W/kg and 4 W/kg as averaged over any 10 grams of tissue for the extremities, respectively, in both controlled and uncontrolled environments, and imposed measurable current limits as a means of limiting peak SARs in narrow cross-sectional areas of the body, such as the wrists and ankles. These limits on currents through the extremities also serve to limit peak SARs occurring elsewhere in internal organs of the body. Measurements are showing that near certain types of RF transmitters, human exposure on the basis of induced and contact currents is significant, and, in many cases, constitutes the primary aspect of RF exposure. The FCC notes in paragraph 147 of the Report and Order that RF currents are difficult to evaluate, and, in paragraph 151, that it is primarily an occupational exposure situation, and thus such limits will not be adopted by FCC at this time. Nevertheless, induced RF currents occur, whether measured or not, when the body is in the vicinity of certain RF transmitters, and it remains an important exposure issue. DoD intends to continue applying considerable efforts in developing techniques to evaluate induced and contact RF current exposure environments.

The FCC 96-326 Rule fails to provide adequate definitions, limits, rules for assessing compliance, or methods for providing interpretations or modifications. Confusion has been introduced with the combination terms "Occupational/Controlled" and "General Population/Uncontrolled". Lengthy debate by RF experts on controlling areas (which can be controlled) versus populations (which can not be controlled easily), led to the consensus found in ANSI/IEEE C95.1-1992. This has been critically compromised by the FCC combination of these terms.

V. FCC RULING CONFLICTS WITH NEW INTERNATIONAL STANDARDS.

The FCC should consider an internationally accepted consensus standard. ANSI/IEEE C95.1-1992 has been used as a basis for several international safety guidelines, including the newly revised North Atlantic Treaty Organization (NATO) Standardization Agreement (STANAG) 2345, (Reference I). That standard was unanimously endorsed, on 16 April 1996, by the 16 member nations of the General Medical Working Party of the NATO Military Agency For Standardization. Communications devices used internationally that conform to the ANSI/IEEE C95.1-1992 Standard may possibly not meet new FCC regulations. This situation will adversely impact DoD capabilities at home and in the international theater. The international acceptance of the ANSI/IEEE C95.1-1992 Standard ensures compatibility, commonality, and interchangeability of RF communication systems and equipment. Such efforts are consistent with promoting a harmonization of standards that encourage promotion of trade and commercial product development. Presumably, some communications devices used in international market that conform to the ANSI/IEEE C95.1-1992 Standard may not meet the new FCC regulations. This situation could also adversely impact DoD capabilities. International consistency and acceptance of RF standards may also be in the interest of other federal agencies responsible for operating RF transmitters in different countries. The United States led the update of the ANSI C95.1-1992 based NATO Standard and the impact of loss of credibility in that standards setting process would be significant. Assessing the impact of this ruling on DoD operations will require extensive study of the types and number of systems affected.

CONCLUSIONS

The Commission decision to revise its regulations on radiofrequency radiation exposures without coordinating with all Federal agencies and departments having significant responsibility for human safety and occupational health is inappropriate. International standards and systems, with

which the DoD has partnerships with, may be adversely affected. The DoD has not been allowed to review the scientific basis for Report and Order FCC 96-326. In the absence of the best scientific thought to show cause, the DoD has no reasonable basis to discontinue following DoDI 6055.11 and supporting the NATO STANAG 2345, both of which are based on ANSI/IEEE C95.1-1992.

Respectfully submitted,

DEPARTMENT OF DEFENSE

By: 

GEORGE W. SIEBERT, CIH
Assistant Deputy Under Secretary of Defense
(Safety and Occupational Health Policy)
3400 Defense Pentagon
Washington, DC 20301-3400

September 5, 1996

References:

- (a) DoD Comments on Proposed Rulemaking ET Docket No. 93-62, 12 Aug, 93. -- Attached.
- (b) Notice of Proposed Rule Making (NPRM) ET Docket No. 93-62, "Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation".
- (c) IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. ANSI/IEEE C95.1-1992.
- (d) Circular No. A-119 Federal Participation in the Development and Use of Voluntary Standards, Oct 20, 93.
- (e) ADUSD(ES)SH letter to NTIA dated 25 Jul, 96. -- Attached.
- (f) TERP letter to Hon. R. Hundt dated 1 Aug, 96. -- Attached.
- (g) Public Law 104-113-Mar. 7, 1996 "National Technology Transfer and Advancement Act of 1995".
- (h) NATO Standardization Agreement (STANAG) 2345, "*Evaluation and Control of Personnel Exposure To Radio Frequency Fields - 3 kHz to 300 GHz.*"
- (i) Department of Defense Instruction 6055.11 "Protection of DoD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers" 21 February, 1995.



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OFFICE OF THE UNDER SECRETARY OF DEFENSE

WASHINGTON, DC 20301-3000

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AUG 16 1993

FOC MAIL ROOM

Office of the Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

August 12, 1993

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AUG 16 1993

Dear Sir:

This is in response to your Notice of Proposed Rulemaking, ET Docket No. 93-62, to amend the rules and regulations regarding guidelines and methods for evaluating the environmental effects of radiofrequency (RF) radiation from Federal Communication Commission (FCC) regulated facilities.

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

The Department of Defense (DoD) generally supports the proposed action to adopt ANSI/IEEE C95.1-1992 RF exposure guidelines which replaces ANSI C95.1-1982. Enclosed are specific DoD comments on the proposed rule. Please contact CDR Yacovissi on (202) 653-1138, if we can provide any additional information.

Sincerely,

George W. Siebert
George W. Siebert, CIB
Director for Safety and
Occupational Health Policy

Enclosure

cc: ASD(HA)
Chairman, DoD TERP
Chairman, DoD RRFWG

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AUG 16 1993

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

DoD Comments on Proposed Rulemaking
ET Docket No. 93-62

1. Paragraph 13 states "...where there is any question of possible exposure of the general public (which might include non-technical employees) to RF radiation, we propose to apply the more conservative guidelines for uncontrolled environments."

Comment: We are concerned that the emphasis given in the above sentence may override the careful differentiation given in ANSI/IEEE for controlled and uncontrolled RF environments as based on the type of location involved and not on exposure status as an occupational worker or as a member of the general public. ANSI/IEEE C95.1-1992 does not prohibit exposure of a member of the general public in controlled RF environments, nor "... the radio amateur who voluntarily and knowledgeably operates in a controlled RF environment." While some RF exposure situations may be differentiated by either personnel exposure status or by the types of RF location involved so as to arrive at similar results, there may be situations where this coincidence will not occur or will not be feasible.

2. Paragraph 16 states "... we will consider that hand-held portable devices, such as cellular telephones, must comply with the requirements specified for uncontrolled environments." Paragraph 18 states "... we propose to exclude only those low-power devices that meet the uncontrolled guidelines." Footnote 16 states "Exposure of users due to hand-held devices... will also be considered as occurring in uncontrolled environments unless the user is "aware of the potential for exposures as a concomitant of employment..." Footnote 20 refers to general public exposure as an example for the low-power device exclusion for uncontrolled environments.

Comment: The cited statements seem to apply the low-power device exclusion for uncontrolled environments as an appropriate criteria for general public exposures. ANSI/IEEE C95.1-1992 low-power device exclusion rule recognizes that RF energy absorption in the body from devices with low radiated powers will not exceed the standard's exposure criteria. The exclusion for controlled environments applies to devices under the control of an aware user, while the exclusion for uncontrolled environments applies to devices without control or knowledge of the user. We view these definitions in a straightforward manner as applying to an individual who can reasonably be expected to be aware that the device being used emits an RF signal. We consider the key point as simple

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awareness on the part of the user and not other conditions, such as technical training or status as an occupational worker or member of the general public.

ANSI/IEEE C95.1-1992 did not adopt provisions similar to the interpretive statements cited in the above paragraphs. These interpretations tend to introduce occupational and non-occupational RF exposure as an important defining parameter, and to invoke the low-power device exclusion for uncontrolled environments as the only appropriate exposure criteria for hand-held or portable devices used by members of the general public. Implications associated with these statements may greatly increase the complexity involved in determining compliance and in defining unintentional or inadvertent RF exposure situations. The interpretations may also lead to imposing additional restrictions that are not supported by the underlying rationale used in deriving the ANSI/IEEE 1992 exposure limits.

We recommend that the FCC adopt the RF exposure guidelines as published and as defined in ANSI/IEEE C95.1-1992. We applaud the FCC for its leadership in bringing their regulatory requirements into congruence with the most recently developed RF exposure guidelines.



ACQUISITION AND
TECHNOLOGY

OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON DC 20301-3000

JUL 25 1996

Mr. William Gamble
Deputy Associate Administrator
National Telecommunications and Information Administration
(NTIA)/H4099
Department of Commerce
Washington, DC 20230

Dear Mr. Gamble:

The purpose of this letter is to identify points to be raised during deliberations at IRAC meetings concerning whether other Federal Agencies should observe the RF exposure limits being adopted by the FCC (Reference your July 24, 1996, telephone conversation with Mr. Anthony S. Kelly of my staff).

The July 2, 1996, draft Federal Communications Commission's (FCC) Report and Order in the matter of ET Docket No. 93-62, "Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation (RF)," was distributed to the National Telecommunications and Information Administration's (NTIA) Interdepartmental Radio Advisory Committee (IRAC) for internal review. Enclosed are DoD's editorial comments.

Both the FCC and the DoD share similar concerns in ensuring that neither FCC-regulated transmitters nor military systems expose the general public, workers, or our military personnel to excessive levels of RF energy. In their 1993 Notice of Proposed Rule Making (NPRM), the FCC originally proposed adopting the recommendations for RF exposure that were developed by the American National Standards Institute (ANSI) in association with the Institute of Electronics and Electrical Engineers (IEEE) and published as ANSI/IEEE C95.1-1992. DoD supported this proposed action in our response of August 12, 1993. We have incorporated the guidelines of ANSI/IEEE C95.1-1992 into our DoD Instruction 6055.11, "Protection of DoD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers," dated February 21, 1995.

As stated in the draft Report and Order, the FCC now intends to adopt the RF exposure limits published in 1986 in the National Council on Radiation Protection and Measurement Report Number 86 (NCRP 86). Paragraph 28 of the draft Report and Order acknowledges that while most commenters generally supported the FCC's proposed action to follow the ANSI/IEEE C95.1-1992

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guidelines, the decision to adopt other limits was made in deference to the views expressed by some Federal Agencies. The FCC also notes in paragraph 14 that both ANSI/IEEE and NCRP limits are essentially the same for the frequencies used by the majority of FCC licensees, and therefore the impact on their licensees would not be significantly different regardless of which set of guidelines is adopted. This view does not hold over the entire range of frequencies used by the DoD.

In developing the 1992 ANSI/IEEE revision, a number of changes were made to the 1982 version to more realistically assess exposures associated with absorption of RF energy in the body. These provisions included a change in the peak absorption rate criteria for the extremities, new limits for contact and induced RF currents in the body, partial-body exposure limits, changes in certain limits and time-averaging periods at the lower and higher frequencies. It may be that these provisions are more useful to DoD in addressing exposures encountered in some DoD settings than to those concerned more with environmental exposures in residential areas near FCC-regulated transmitters. Other Agencies, such as the Coast Guard, NASA, National Weather Service (NWS), or FAA may have interests similar to DoD. Unless the DoD Tri-Service Electromagnetic Radiation Panel (TERP) advises otherwise, it appears that there are few, if any, technical reasons that would compel the DoD to discontinue observing the recommended limits provided in ANSI/IEEE C95.1-1992.

In their 1993 NPRM, the FCC stated an intent to confer with NTIA in the interest of developing a consistent approach to the treatment of RF environments for the private sector and the Federal government. Working to solve a similar problem, DoD led an effort to revise a North Atlantic Treaty Organization (NATO) agreement for controlling RF exposures among military personnel. This NATO document incorporates the ANSI/IEEE limits and has been unanimously approved by the 16 NATO member countries for ratification.

The DoD has a long history of involvement and experience in RF bioeffects research and standards development. The first personnel exposure limits were set by DoD in the 1950s. These limits formed the basis for the first ANSI RF radiation exposure standard in 1966. DoD has been a major sponsor of RF bioeffects studies, and operates one of world's largest and best equipped RF bioeffects research centers.

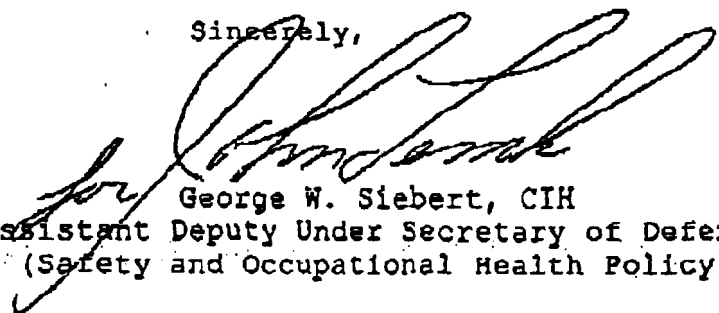
The NTIA-IRAC is invited to visit the Electromagnetic Research Laboratories of our Departments of Army, Navy, and Air Force at Brooks AFB to view the experiments and studies currently in progress, and to talk with our scientists and researchers

whose work has expanded our knowledge of the effects of RF energy absorption on the body. Arrangements for this visit can be made by contacting Dr. Michael R. Murphy, Chair of the DoD Tri-Service Electromagnetic Radiation Panel (TERP), at (210) 536-2095.

We recognize the difficult challenge faced by the FCC given the wide disparity of opinion regarding the proposed rule making. The exposure recommendations of ANSI/IEEE C95.1-1992 were developed over many years by knowledgeable representatives from various government agencies, private industries, universities, and individuals conducting biomedical research. Therefore, we request the NTIA urge the FCC to adopt the exposure recommendations of ANSI/IEEE C95.1-1992

Thank you for considering our input. If you have questions, please contact Mr. Kelly at (703) 604-1874.

Sincerely,



George W. Siebert, CIH
Assistant Deputy Under Secretary of Defense
(Safety and Occupational Health Policy)

Enclosure

cc: Ms. Cindy Raiford, OASD(C3I)

DoD's Editorial Comments to the July 2, 1996 draft Federal Communications Commission's (FCC) Report and Order in the matter of ET Docket No. 93-62, "Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation (RF)"

1. Paragraph 28, page 13 states that the FCC is adopting the NCRP limits as recommended by the EPA and that these limits will better protect workers and the general public. In light of the information in the preceding 16 paragraphs, it is not clear whether FCC is claiming that better protection will accrue from adopting NCRP 86 over the 1982 ANSI cited in current FCC regulations, or from adopting NCRP 86 in place of the 1992 ANSI/IEEE as originally proposed in the NPRM.
2. Paragraph 62, page 25 discusses the decision to adopt ANSI/IEEE SAR limits for evaluating low power devices that are used in the immediate vicinity of the body. In Paragraph 72, states that this decision does not include adoption of the ANSI/IEEE low power device exclusion for those devices operating below certain power levels. For the purpose of clarity, paragraph 62 should also include the significant point that the FCC is not adopting the ANSI/IEEE low power device exclusion based on radiated power at this time.
3. Paragraph 77, page 30: Footnote number 76, which follows the first sentence, appears to be more closely related to the second sentence.
4. Paragraph 136, page 50: The initial portion of paragraph 136 is missing.
5. Appendix A, page 71: Note (4) appears to be a carryover from some other report, since it refers to not measuring induced and contact currents as part of this study.
6. Appendix A, page 72: Table 4 needs to be relabeled as Table 3 since there is no existing Table 3.
7. Appendix B, page 76: Table 1(B) appears to unnecessarily employ a frequency range partition that is derived from the 1992 ANSI/IEEE standard rather than the partition used in NCRP 86 for public exposure limits as shown on page 72.

Enclosure



DEPARTMENT OF THE AIR FORCE
ARMSTRONG LABORATORY (AFMC)
BROOKS AIR FORCE BASE, TEXAS

1 Aug 96

Honorable Reed E. Hundt
Chairman
Federal Communications Commission
1919 M Street, N.W.
Washington D.C. 20554

Dear Mr Hundt:

At the request of the Tri-Service members of the Interdepartmental Radio Advisory Committee (IRAC), the Department of Defense (DoD) Tri-Service Electromagnetic Radiation Panel (TERP) has reviewed the 2 July 96 Draft proposed guidelines on the Federal Communications Commission (FCC) Notice of Proposed Rule Making (Notice) ET Docket No. 93-62, "Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation". Although the Tri-Services agree with the goal for development of a consensus on the guidelines adopted by the FCC, we believe that the proposed guidance has not received appropriate open/public review by a sufficiently large enough body of identified radiofrequency health and safety experts to be considered a valid consensus document.

The DoD is responsible for the health and safety of all its personnel and operates several thousand radiofrequency emitting systems. The DoD is committed to providing a safe environment to protect personnel health and preserve defense capability. The TERP is the designated DoD Technical and Policy Advisor for all aspects of Electromagnetic Radiation Safety issues and is the functional area expert for Health Effects and Protective Measures. The TERP is authorized and qualified to comment on RF Safety and Occupational Health issues.

The TERP remains fully supportive of DoD comments dated 12 Aug 93 on the original Notice which proposed to adopt the American National Standards Institute (ANSI) and Institute of Electrical and Electronics Engineers (IEEE) Standard, ANSI/IEEE C95.1-1992. In the Notice, FCC noted that the ANSI/IEEE C95.1-1992 Standard (ANSI/IEEE C95.1) reflects recent scientific studies of the biological effects of RF radiation and that use of this standard would thus ensure that FCC regulated facilities comply with the latest safety standards for RF exposure. The TERP agrees.

The TERP does not find any compelling technical reasons for the Services to discontinue observing the recommended limits described in ANSI/IEEE C95.1 or for abandoning Department of Defense Instruction 6055.11 (DoDI 6055.11) "Protection of DoD Personnel from Exposure to Radiofrequency Radiation and Military Exempt Lasers" which is based on ANSI/IEEE C95.1.

The DoD supports Federal use of voluntary nongovernmental consensus standards, such as ANSI/IEEE C95.1. Office of Management and Budget policy (Circular No. A-119 Federal Participation in the Development and Use of Voluntary Standards, 20 Oct 93) requires that the "Federal Government rely on voluntary standards, both domestic and international, whenever feasible and consistent with the law and regulation pursuant to law." The ANSI/IEEE C95.1 meets these requirements; neither the National Council on Radiation Protection (NCRP) 1986 Report nor the proposed guideline do.

It is important that FCC consider an internationally accepted consensus standard to provide global uniformity. ANSI/IEEE C95.1 has been used as a basis for several safety guidelines, including the new North Atlantic Treaty Organization (NATO) Standardization Agreement (STANAG) 2345. That

international standard was unanimously endorsed, on 16 Apr 96, by the 16 member nations of the General Medical Working Party of the NATO Military Agency For Standardization. The French government has also recently incorporated the exposure limits of STANAG 2345 for the controlled environment. The international acceptance of the ANSI/IEEE C95.1 Standard will facilitate compatibility, commonality, and interchangeability of RF communication systems and equipment.

Growing public and international confidence in the ANSI/IEEE C95.1 is based on the consensus developed by a large number of contributing experts (over 120) from over 14 different disciplines including scientists, public health officials, medical doctors and technical experts. The experts came from industry, academia, and government agencies including DoD, the Department of Energy (DoE), the Environmental Protection Agency (EPA), the National Institute for Occupational Safety and Health (NIOSH), the Food and Drug Administration (FDA), and the Occupational Safety and Health Administration (OSHA). No agency or group exerted dominating influence on that consensus process.

The lack of confidence in the 1986 NCRP Report process is due to the extremely small by invitation only membership, and the fact that it was not a consensus process. The lack of open public review of the current proposed guidance will engender a similar lack of confidence. The TERP notes that many of the original NCRP committee members and its support scientists later helped draft the newer ANSI/IEEE C95.1 Standard and that many of these same leading experts have recommended the FCC adopt the ANSI/IEEE C95.1 Standard over the NCRP 1986 Report or any proposed hybrid.

The TERP supports the FCC's view in Notice No. 93-62 that recognizes the importance of "coordinated actions to develop consistent approach to the treatment of RF exposure environments ..." This is especially important since ANSI/IEEE C95.1 Standards have served to coordinate RF protection efforts among industry, military, and government agencies for the last 30 years. If the ANSI/IEEE C95.1 is not adopted by FCC, all of the agencies and industry users that have adopted the 1992 Standard will suffer loss of credibility and the resulting confusion and lack of coordinated action will lead to further public distrust and concern.

The ANSI/IEEE C95.1 is a living standard supported by active standing committees to provide interpretations, periodic updates, and adjunct documents such as its companion, ANSI/IEEE C95.3-1991 *Recommended Practice for Measurement of RF*. There are no plans by NCRP nor within the FCC proposed guideline to provide continued review, interpretations, or updates.

The Tri-Services strongly recommends the FCC stay the course with their Notice, and maintain the consistent approach to the control of RF environments that civilian and military users have successfully applied over the last few decades as our country continues to develop and enjoy the full potential and benefits of the RF spectrum.

The Tri-Services recommends that the FCC adopt, as an interim Standard, the ANSI/IEEE C95.1. We further recommend that the EPA, FDA, NIOSH, OSHA and the TERP join together, in open-public forum, with the IEEE Standards Coordinating Committee 28, as it updates the ANSI/IEEE C95.1 Standard and thereby produce a truly national standard.

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